Discussion: How can bilateral coordination in the RGB contribute to and benefit from the *North American Drought Monitor*?

Moderators:

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National Climatic Data Center

Background on NADM including development of national inputs

- ✓ Each national depiction (U.S., Mexico, Canada) is developed independently within each country
- ✓ Convergence of evidence approach using many drought indices, indicators, & impacts
- ✓ Continental drought indicators used for smoothing depiction along international borders
- ✓ Peer reviewed
- ✓ NADM is produced monthly
- ✓ Inputs: USDM weekly, Canada DM & Mexican DM monthly
- ✓ ArcGIS

Canada and the NADM

- Collaborative effort
  - National lead authors prepare national maps
  - Rotational NADM lead country integrates the 3 national maps
- NAIS coordinates activities in Canada
  - Input from forestry & surface water agencies
  - NAIS focus is agriculture
- Canada has a team of regional staff who verify local conditions
  - High demand on the limited resources available
  - Branch reorganisation may reduce availability of staff in the regions
- Our end users
  - Ongoing need to better define who they are
  - Canadian end users are primarily a limited number of federal and provincial resources specialists

Canada and the NADM (cont'd)

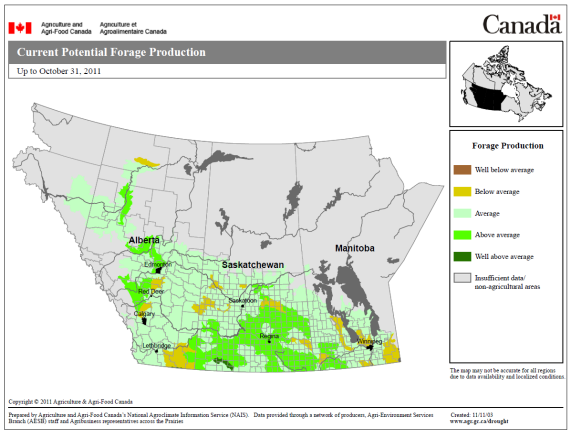
- Drought in Canada has unique aspects:
  - Strong focus on rainfed agriculture
  - Large differences in drought impacts between west and east
  - Less concern about water shortages than US and Mexico
  - Less political pressure than the US;
- NADM indices are not easy to interpret for average end user
  - External Canadian users prefer precip totals and percent normal; they have their own means to interpret implications from these data
  - NADM indices are relevant for our internal resource specialists

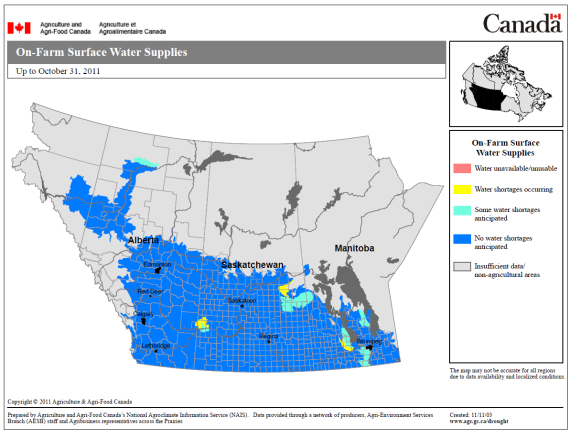
How can drought conditions and impacts in the RGB be better reported and reflected in the NADM?

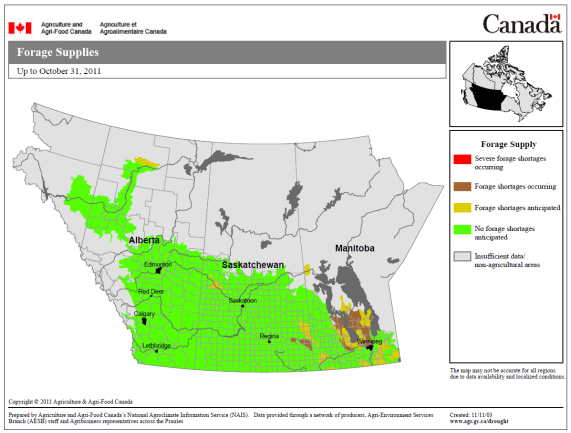
- ✓ Draw from existing state-level activities?
- ✓ Bilateral coordination calls?
- ✓ Regional drought outlook and assessment forums?
- ✓ RGB drought conditions/impacts feed into NADM? Or into the national (US & MX) DMs?
- ✓ Relational data base and GIS display system for impacts
  - ➢ Specific impact indicators from every state/county in RGB region
  - ➢ Entered into data base operationally (monthly? weekly?)
  - ➢ Displayed in map form and scaled appropriately
  - ➢ RGB impacts pilot could be proof of concept for national (all 3 countries)/continental systems

Assessing the Impacts of Drought

- Agriculture and Agri-Food Canada coordinates a network of approximately 350 volunteer farmers in the prairie region, who provide information on the impacts of drought and other extreme weather impacts.
- For over 10 years we have been collecting information on agricultural water supplies, forage supplies and forage productions.



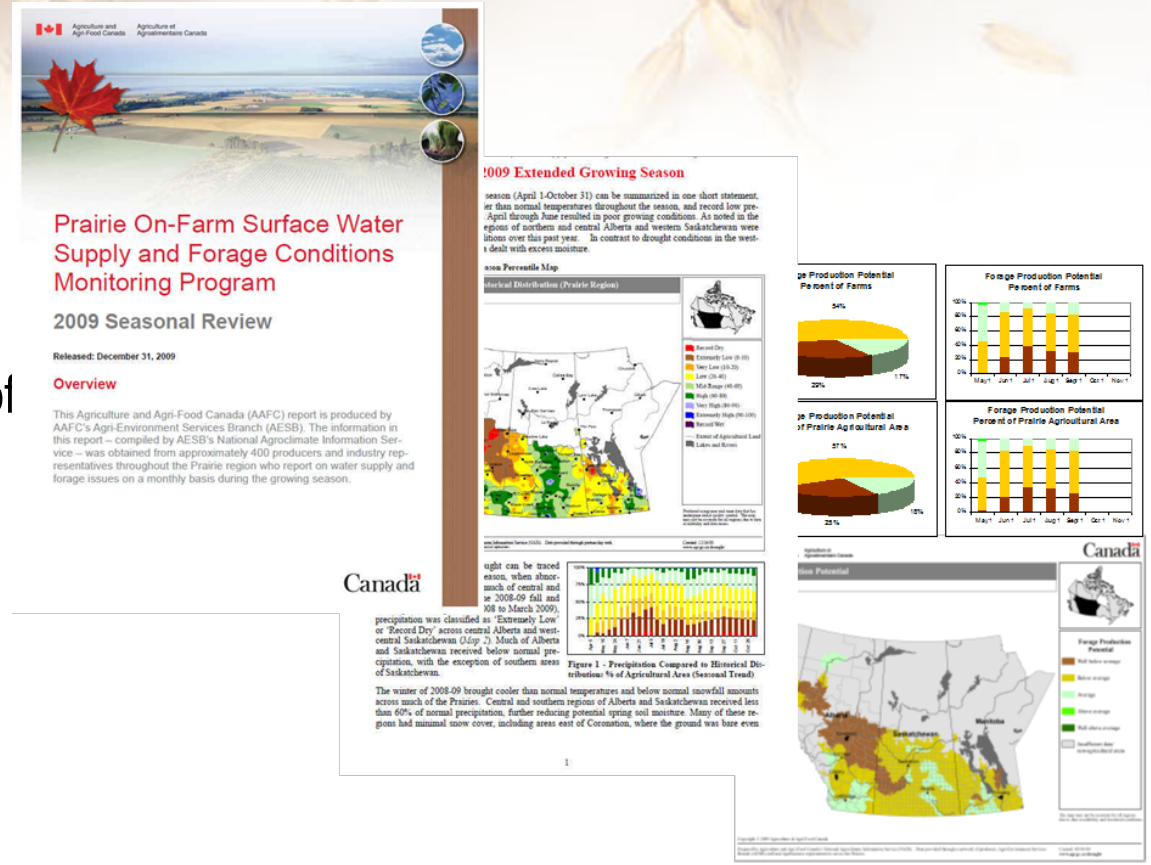




Agroclimate Impact Monitoring

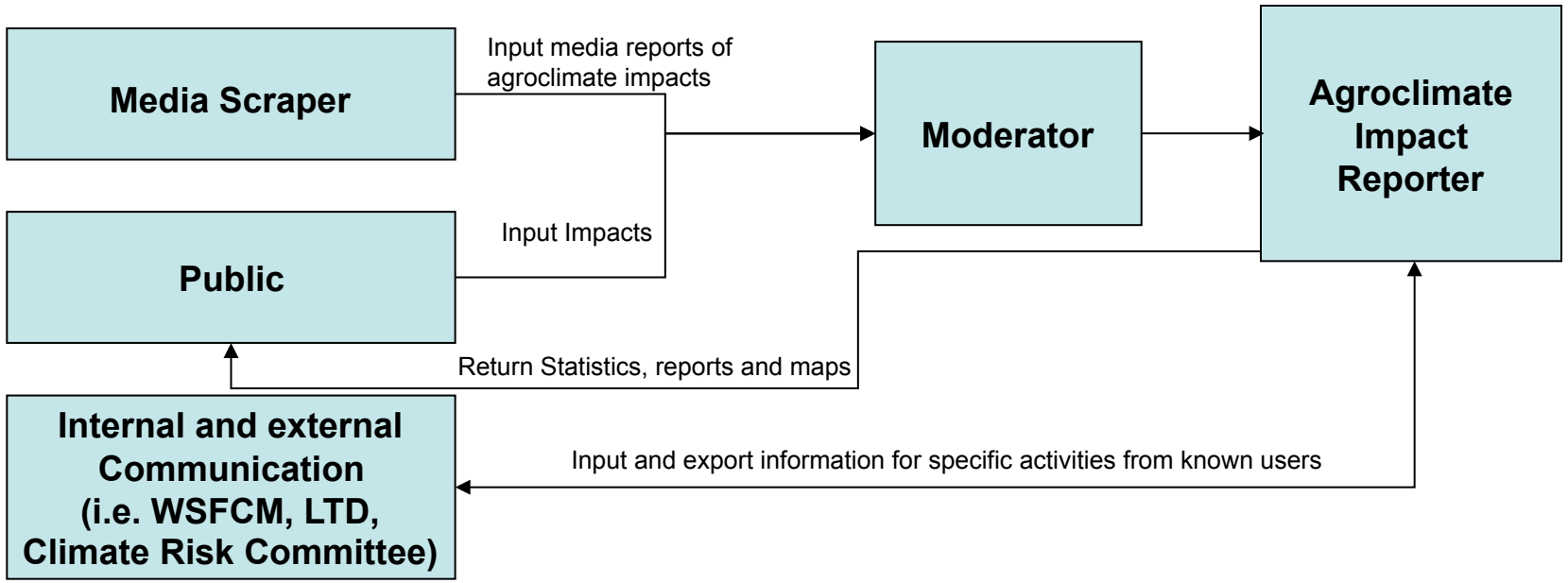
NAIS has:

- Developed a new online data collection tool (Agroclimate Impact Reporter)
- Increased the density of the volunteer network
- Expanded the geographical scope of the program
  - Included B.C. in 2012
- Increased the value of the information collected
  - Linked to ag statistics (e.g. number of farms affected).

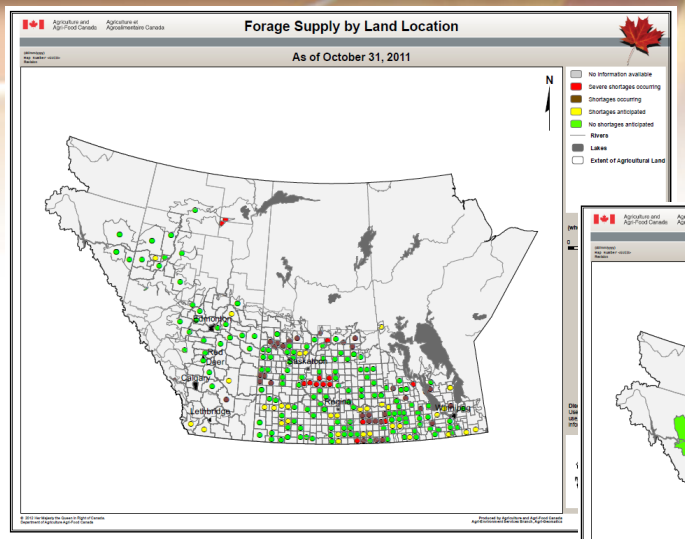


The Agroclimate Impact Reporter (AIR)

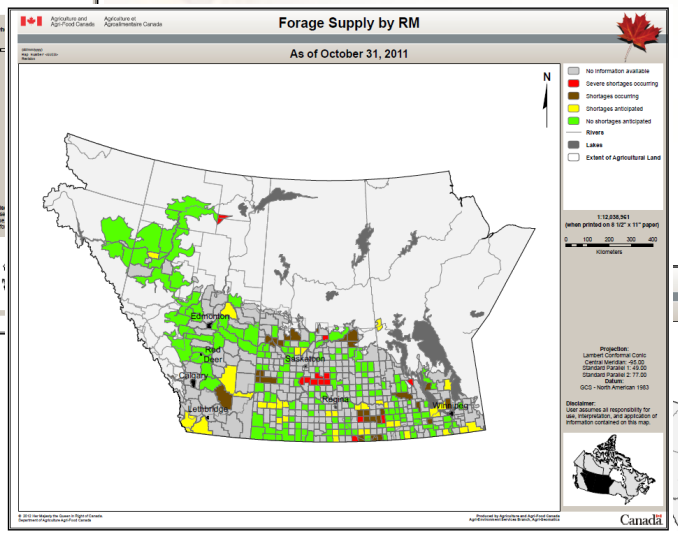
- The Agroclimate Impact Reporter meets the need for a **National Agroclimate Impacts Database** and a tool to electronically collect, integrate, manage and display various forms impacts of climate on the agricultural systems throughout Canada.
- The AIR allows anonymous sources as well as registered users to easily input data for the assessment of drought, floods and other climate related impacts.



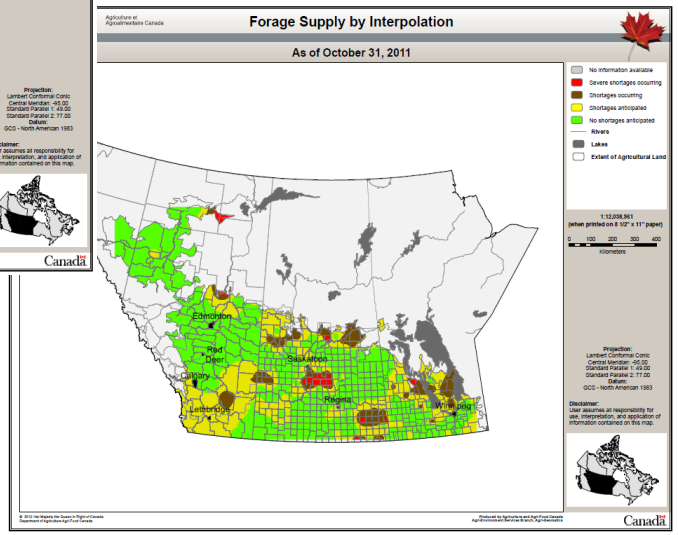
Examples of Output from the AIR System



Point values



Point values used to classify Municipalities



Interpolated to provide a complete coverage

CoCoRaHS is a pilot in Manitoba in 2012 …

The Community Collaborative Rain, Hail and Snow Network is a national grassroots community based high density precipitation network across the United States, and **now Canada**.

www.cocorahs.org/

How can the usefulness of the NADM be assessed on a regional scale?

- ✓ Who is using the NADM in the RGB, what are they using it for, and how are they benefiting from the information?
- ✓ How can an assessment of the NADM's usefulness in the RGB inform and enhance the overall NADM product and process?
- ✓ RGB basin serve as pilot (proof of concept) for some of the NACSP Drought Initiative activities?